

### Abstract

A hearing device has a behind-the-ear microphone arrangement that is not to be placed in the ear canal of the wearer. The microphone arrangement has a first microphone with an output. An electrical/mechanical output converter has a further microphone and a beam former unit with at least two inputs and an output. One beam former input is operationally connected to the output of the first microphone. The second beam former input is operationally connected to the output of the further microphone. The beam former output is operationally connected to an input of the output converter. The beam former unit together with the first and further microphones have a transfer characteristic for acoustical signals impinging on the first and further microphones to an electric signal at the output of the beam former. The amplification of the signal is dependent on the direction with which the acoustical signals impinge on the microphones and on the frequency of the acoustical signals. The direction measured from a reference direction of  $0^\circ$  with respect to the direction in which the wearer is facing, such that the outward direction of the ear canal is at about  $90^\circ$ . The transfer characteristic has the following features: a substantially constant amplification independent of the direction of impingement at a frequency of about 1kHz and, for a direction of impingement of about  $45^\circ$ , a larger amplification than for a direction of impingement of about  $135^\circ$  at the frequency of about 5kHz.